

Serial No. 10/645,089

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CENTRAL FAX CENTER **PATENT**
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IN THE CLAIMS:

The status of the claims is as follows. This listing of claims replaces all prior versions and listings of claims in the application.

1. (Currently Amended) A guide wire to assist percutaneous endovascular deployment within a thoracic arch region of an aorta,

the guide wire having zones of varying stiffness comprising:

~~an elongate central zone of high stiffness and substantially constant diameter along its length;~~

a proximal zone of transition from high stiffness to semi-stiffness and having a length of from 3 cm to 20 cm;

an elongate central zone of high stiffness and substantially constant diameter along its length; and

a distal zone of transition from high stiffness to being relatively flexible and wherein the distal zone comprises a distal pre-formed curve with a radius of curvature of from 5 cm to 15 cm and being comprised of three zones:

a semi stiff zone adjacent to the central zone;

a transition zone having ~~being of~~ flexibility of from semi-stiff extending to flexible;

and

a tip zone having ~~being of~~ high flexibility and having ~~wherein the tip zone has~~ a tip curve with a radius of curvature of from 5 to 20 mm, the high flexibility and the radius of curvature being selected so that the tip curve can bump into the aortic valve without causing damage.

2. (Cancelled)

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3. (Currently Amended) A guide wire as in Claim ~~claim~~ 1 wherein the central zone comprises a stainless steel mandrel.
4. (Currently Amended) A guide wire as in Claim ~~claim~~ 1 wherein the proximal zone comprises a tapered mandrel with a proximal wire coil of substantially constant coil diameter on and extending along the tapered mandrel.
- 5-6. (Cancelled)
7. (Original) A guide wire as in Claim 4 wherein the proximal wire coil is laser welded to the tapered mandrel.
8. (Original) A guide wire as in Claim 4 wherein the proximal wire coil terminates in a rounded tip.
9. (Previously Presented) A guide wire as in Claim 1 wherein the distal zone comprises in order from the central zone, a tapered mandrel portion and a portion of constant reduced diameter with a distal wire coil of substantially constant coil diameter on and extending along the tapered mandrel portion and the portion of constant reduced diameter.
10. (Cancelled)
11. (Original) A guide wire as in Claim 9 wherein the distal wire coil is laser welded to the tapered mandrel portion.

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12. (Original) A guide wire as in Claim 9 wherein the distal wire coil terminates in a rounded tip.

13. (Cancelled)

14. (Previously Presented) A guide wire as in Claim 1 wherein the distal curve comprises a portion of the central zone, the semi stiff zone adjacent the central zone and a portion of the transition zone.

15-27.(Cancelled)

28. (Previously Presented) A guide wire as in Claim 1 wherein at least some portions of the guide wire are radio-opaque.

29-34.(Cancelled)

35. (Previously Presented) A guide wire as in Claim 1 wherein the proximal zone comprises a proximal wire coil of substantially constant diameter and the distal zone comprises a distal wire coil of substantially constant coil diameter and the central zone, the proximal wire coil and the distal wire coil are coated with polytetrafluoroethylene.

36. (Currently Amended) A guide wire to assist percutaneous endovascular deployment within a thoracic arch region of an aorta comprising:
~~a mandrel of substantially constant diameter along its length in a central zone;~~

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a proximal portion of the mandrel having a proximal tapered portion with a proximal wire coil on and extending along the proximal tapered portion;

a central zone of the mandrel having a substantially constant diameter along its length;

a distal portion of the mandrel comprising in order from the central zone,

a distal tapered portion, and

a portion of constant reduced diameter with a distal wire coil on and extending along the distal tapered portion and the portion of constant reduced diameter having high flexibility and having a tip curve with a radius of curvature of from 5 to 20 mm, the high flexibility and the radius of curvature being selected so that the tip curve can bump into the aortic valve without causing damage.

37. (Previously Presented) A guide wire according to Claim 36, wherein the diameter of the mandrel in the central zone, the coil diameter of the proximal wire coil, and the coil diameter of the distal wire coil are all substantially equal.

38. (Previously Presented) A guide wire according to Claim 36, wherein the central zone, the proximal wire coil and the distal wire coil are coated with polytetrafluoroethylene.

39. (Previously Presented) A guide wire according to Claim 36, wherein at least some portions of the guide wire are radio-opaque.

40. (Currently Amended) A guide wire according to Claim 36, wherein the distal wire coil terminates in a rounded J tip.

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41. (Currently Amended) A guide wire that has a stiffness to control large diameter, stiff devices but still not damage the aortic valve vasculature or the lumen of the delivery system, wherein the guide wire has 5 zones of differing stiffness, a first zone constituting a distal tip end and being very floppy and atraumatic, the distal tip end being configured to bump into the aortic valve without causing damage; a second zone, between the first zone and a third zone, being a transition zone going from floppy to semi-stiff; the third zone, between the second zone and a fourth zone, being a semi-stiff semi stiff-region; the fourth zone, between the third zone and a fifth zone, being the body of the guide wire and very stiff; and the fifth zone, at the proximal end of the guidewire, being a transition zone from very stiff to semi-stiff at the proximal-most end of the guidewire.

42. (Previously Presented) A guide wire according to Claim 41, having a "J" curve in a floppy tip portion of the distal tip, which provides a shape and leading end surface that minimizes the possibility of digging into the vessel wall.

43. (Previously Presented) A guide wire according to Claim 41, having a large-radius secondary curve that incorporates the transition to semi-stiff zone, the semi-stiff zone and the distal part of the stiff or body portion, sized to roughly fit the curvature of the aorta.

44. (Previously Presented) A guide wire according to Claim 41, having a transition from full stiffness to semi-stiff at the proximal end, the semi-stiff proximal

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portion providing flexibility to allow the interventional delivery system to be loaded onto the wire and advanced without damaging the guide wire lumen or becoming jammed in the interior of the device.

45. (Previously Presented) A guide wire according to Claim 41, wherein the first and fifth zones are coated with polytetrafluoroethylene.

46. (Previously Presented) A guide wire according to Claim 41, wherein the first zone terminates in a rounded tip.

47. (Previously Presented) A guide wire according to Claim 41, wherein at least some portions of the zones are radio-opaque.